

REMARKS

By this amendment, claims 67, 87-88, 92, 99, 112-116, 119-125, 134, and 144 have been amended. Claims 67-82, 86-89, and 92-144 are pending in the application. Applicant reserves the right to pursue the original claims and other claims in this and other applications. The statement that claims 112-116 and 120 contain allowable subject matter is gratefully acknowledged.

Claims 120-124 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims have been amended to address the concerns raised in the Office Action. It should be noted that the claims may also read on FIG. 8 of the application. Applicant respectfully requests that the rejection of these claims be withdrawn and the claims allowed.

Claims 112-116 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-67 of U.S. Patent No. 6,316,969 (the '969 patent) in view of Muto (JP 11-026593) and further in view of Mirov (US 6,008,682). The rejection is respectfully traversed. Applicant notes that in this Amendment and during subsequent prosecution the claims of the present application may be amended to make this rejection unnecessary. Moreover, claim 112 of the present application recites "a plurality of components selected from the group consisting of capacitive elements, inductive elements and a combination of capacitive and inductive elements, the components being connected at spaced intervals to the transmission line between the first and second ends to change an apparent length of the transmission line, wherein the termination circuit comprises an amplifier circuit coupled to the second end of the transmission line, wherein the termination circuit comprises an amplifier circuit comprising a pair of cross-coupled differential CMOS amplifiers coupled to the second end of the transmission line," which is not taught or

suggested by the claims of the '969 patent. Nor are Muto or Mirov cited for these limitations. Therefore, claims 112-116 of the present application are not obvious over the cited combination.

Claims 119-124 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-44 of U.S. Patent No. 6,307,405 (the '405 patent) in view of Muto and further in view of Mirov. The rejection is respectfully traversed. Applicant notes that in this Amendment and during subsequent prosecution the claims of the present application may be amended to make this rejection unnecessary. Moreover, claim 119 of the present application recites a "termination circuit [which] comprises a pair of cross-coupled differential amplifier circuits coupled to the second end of the transmission line, each of the amplifier circuits comprising: a first transistor of a first conductivity type, a signal input node coupled to a source/drain region of the first transistor; a second transistor of a second conductivity type, the first and second transistors being coupled at a source/drain region; a signal output node coupled to the source/drain region of the first and second transistor in the amplifier circuit; and a third transistor, the signal input node further coupled to a gate of the third transistor, and a source/drain region of the third transistor being coupled to a gate of the first transistor" (emphasis added), which is not taught or suggested by the claims of the '405 patent. Nor are Muto or Mirov cited for these limitations. Therefore, claims 119-124 of the present application are not obvious over the cited combination.

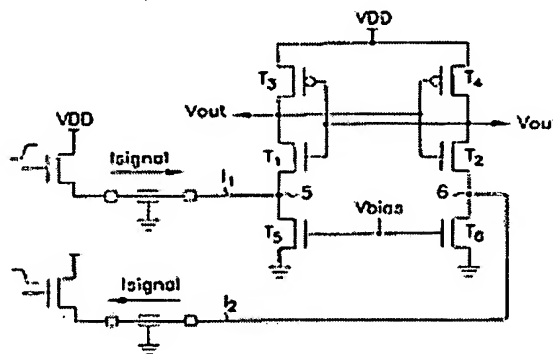
Additionally, Applicant notes that the claims can be fully considered now without the double patenting issues being immediately addressed. As such, Applicant respectfully requests that the double patenting rejections be held in abeyance until allowable subject matter is indicated, or that the rejections be withdrawn.

Claims 67-82, 86-89, 92-111, 117-119, 121, 124, and 125-144 stand rejected under 35 U.S.C. 103(a) as being unpatentable over APA (prior art of Forbes, US 6,377,084) in view of Muto and further in view of Mirov. This rejection is respectfully traversed.

Claim 67 recites a signal transmission system comprising, *inter alia*, "a pair of cross-coupled differential amplifiers; a first transmission member having a first length and an impedance less than 100 ohms, the first transmission member coupled to a first of the pair of cross-coupled differential amplifiers; [and] a second transmission member having a second length, the second transmission member coupled to a second of the pair of cross-coupled differential amplifiers." (emphasis added). Independent claims 87-88, 92, 99, 125, and 134 recite similar limitations. Applicant respectfully submits that the APA does not teach or suggest these limitations.

To the contrary, the APA teaches in FIG. 2 (reproduced below) only a single differential current sense amplifier, which cannot read on the multiple cross-coupled differential amplifiers of the claimed invention. Applicant respectfully submits that the APA does not disclose, teach, or suggest a pair of cross-coupled differential amplifiers, as recited in claims 67, 87-88, 92, 99, 125, and 134. Muto and Mirov are neither cited for, nor do they teach or suggest, these limitations. Thus, Muto and Mirov do not remedy the deficiencies of the APA.

APA FIG. 2



Since the APA, Muto, and Mirov do not teach or suggest all of the limitations of claims 67, 87-88, 92, 99, 125, and 134, claims 67, 87-88, 92, 99, 125, and 134 are not obvious over the cited combination. Claims 66-82, 86, 89, 93-98, 100-111, 117-119, 121, 124, 126-133, and 135-144 depend, respectively, from claims 67, 87-88, 92, 99, 125, and 134, and are patentable at least for the reasons mentioned above, and on their own merits. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 67-82, 86-89, 92-111, 117-119, 121, 124, and 125-144 be withdrawn and the claims allowed.

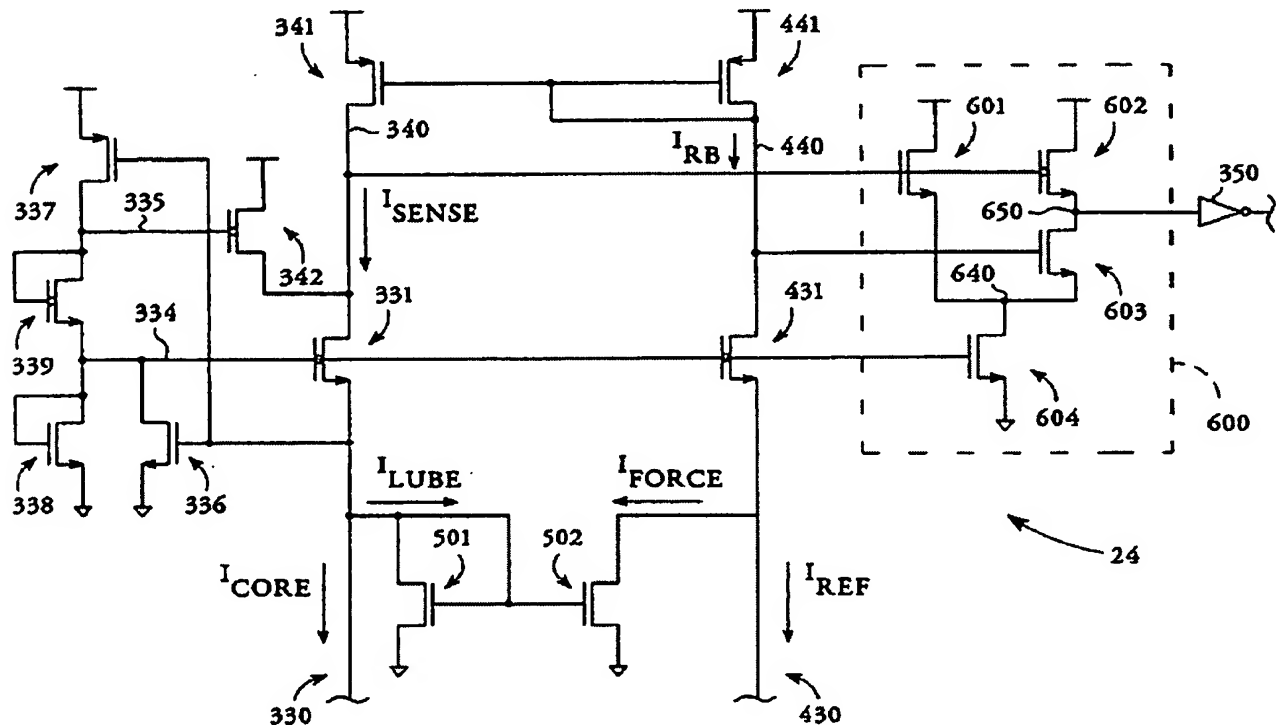
Claims 119 and 122-124 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Smarandoiu et al. (US 5,390,147) in view of Muto, and further in view of Mirov. The rejection is respectfully traversed. None of Smarandoiu et al., Muto, or Mirov, even when considered in combination, teaches or suggests all limitations of claim 119.

Claim 119 recites an integrated circuit interconnection comprising a "termination circuit [which] comprises a pair of cross-coupled differential amplifier circuits coupled to the second end of the transmission line, each of the amplifier circuits comprising: a first transistor of a first conductivity type, a signal input node coupled to a source/drain region of the first transistor; a second transistor of a second conductivity type, the first and second transistors being coupled at a source/drain region; a signal output node coupled to the source/drain region of the first and second transistor in the amplifier circuit; and a third transistor, the signal input node further coupled to a gate of the third transistor, and a source/drain region of the third transistor being coupled to a gate of the first transistor" (emphasis added). Smarandoiu et al. does not teach or suggest these limitations.

To the contrary, Smarandoiu et al. teaches in FIG. 2 (reproduced below on the next page) that the reference input 430 is connected to the drain of third pass transistor

431 and to the drain of transistor 502. Furthermore, Smarandoiu et al. does not teach or suggest any transistor source/drain region connected to the gate of transistor 431. Applicant respectfully submits that Smarandoiu et al. does not disclose, teach, or suggest a third transistor, the signal input node further coupled to a gate of the third transistor, and a source/drain region of the third transistor being coupled to a gate of the first transistor, as recited in claim 119. Muto and Mirov are not cited for, nor do they teach or suggest, these limitations. Thus, Muto and Mirov do not remedy the deficiencies of Smarandoiu et al.

Smarandoiu et al. FIG. 2

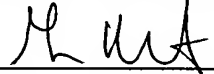


Since Smarandoiu et al., Muto, and Mirov do not teach or suggest all of the limitations of claim 119, claim 119 and dependent claims 122-124 are not obvious over the cited combination. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 119 and 122-124 be withdrawn.

In view of the above, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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